SONY

3-750-511-22 (1)

Video TV Recorder 8

GV-9

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

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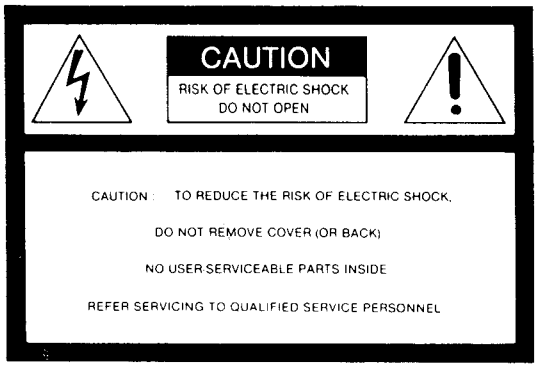
Owner's Record

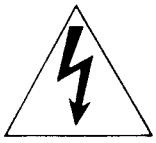
The model and serial numbers are located on the bottom. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. GV-9 Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna
Relocate the equipment with respect to the receiver
Move the equipment away from the receiver
Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:
"How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

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Features

For details, refer to the pages indicated in ●.

With Sony GV-9 video TV recorder, you can;
— view playback picture of 8mm video tapes. ㉞
— view TV programs. ㉒
— record TV programs. ㉚

In addition, if you connect an optional video camera to this unit, you can record pictures through the camera and view them immediately. ㊻

Compact and lightweight design allows you the outdoor use.

Other features

— Timer recording ㊳
— Sleep timer turns the power off automatically ㉖
— Picture can be muted when it is not necessary: e.g. when viewing pictures with another TV/monitor which is connected to this unit or when listening only to the sound. ㉕

This unit uses 8mm video format cassettes. It records in the SP mode (approximately 1.43 cm/second) and the LP mode (approximately 0.72 cm/second) and can play back in the SP mode and LP mode.
The quality of the playback picture in the LP mode, however, will not be as good as that in the SP mode.

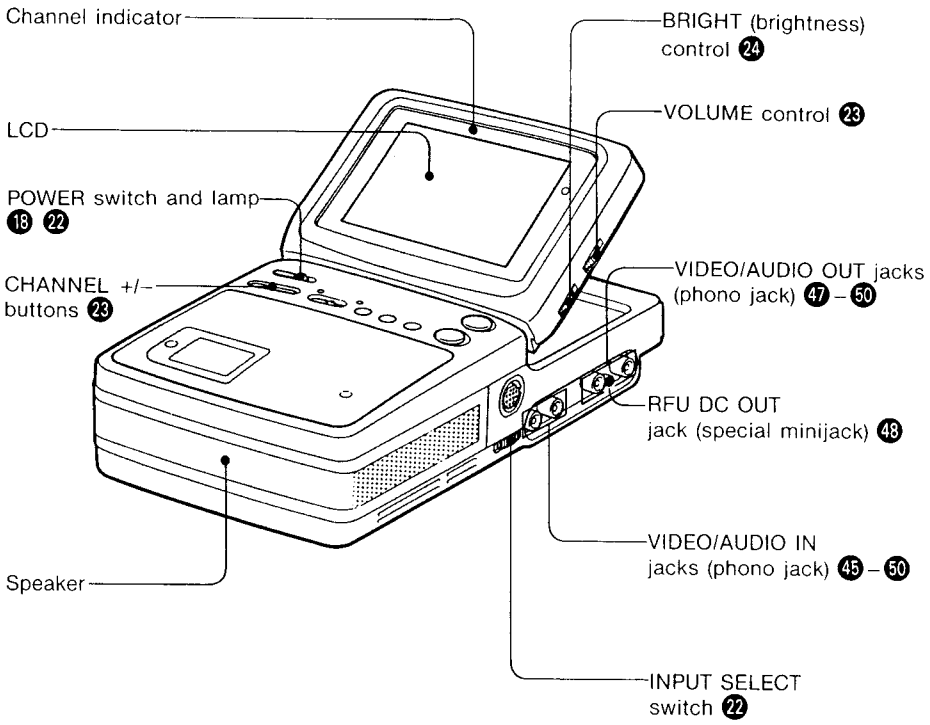
Television programs, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws.

PCM recording/playback is not possible with this unit. The PCM sound recorded with another recorder cannot be played back with this unit.

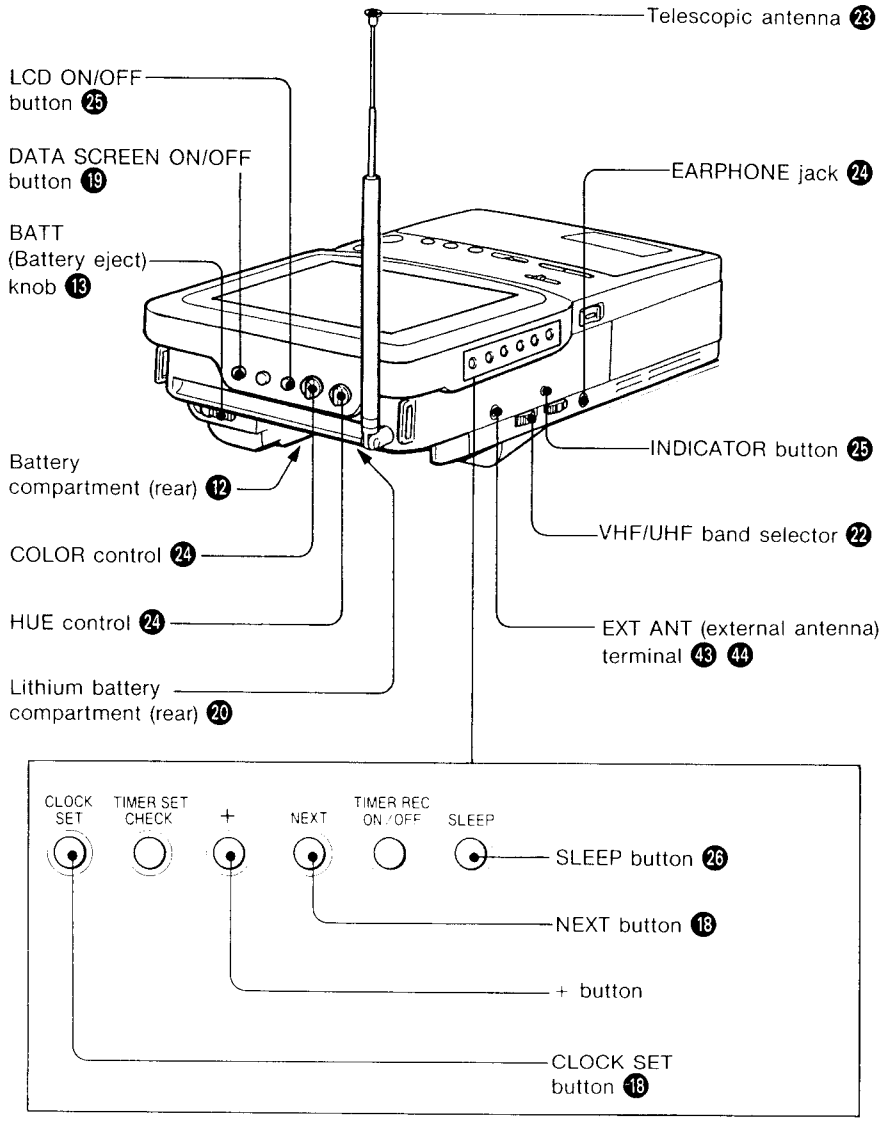
For using the recorder abroad, see page 53.

Location of Parts and Controls

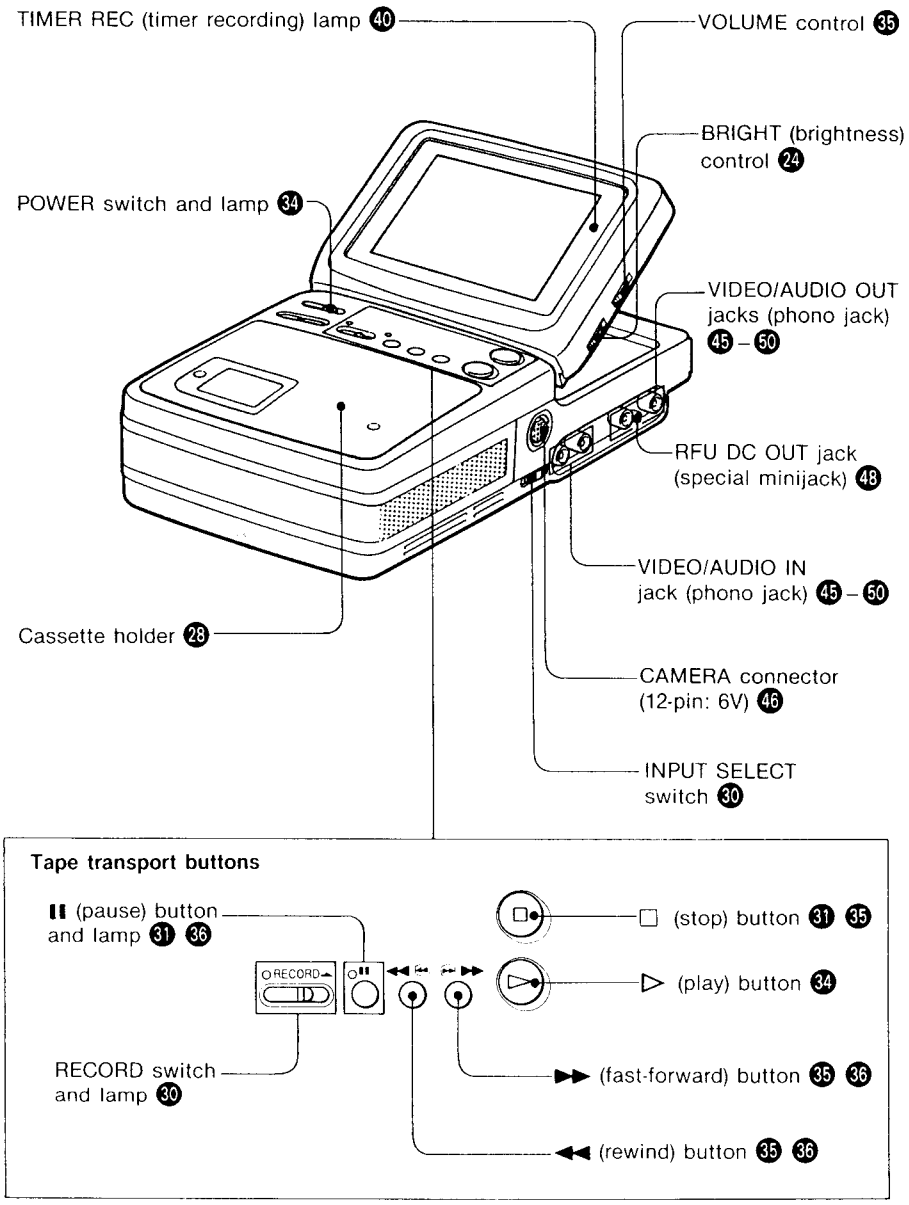
Parts for watching TV programs

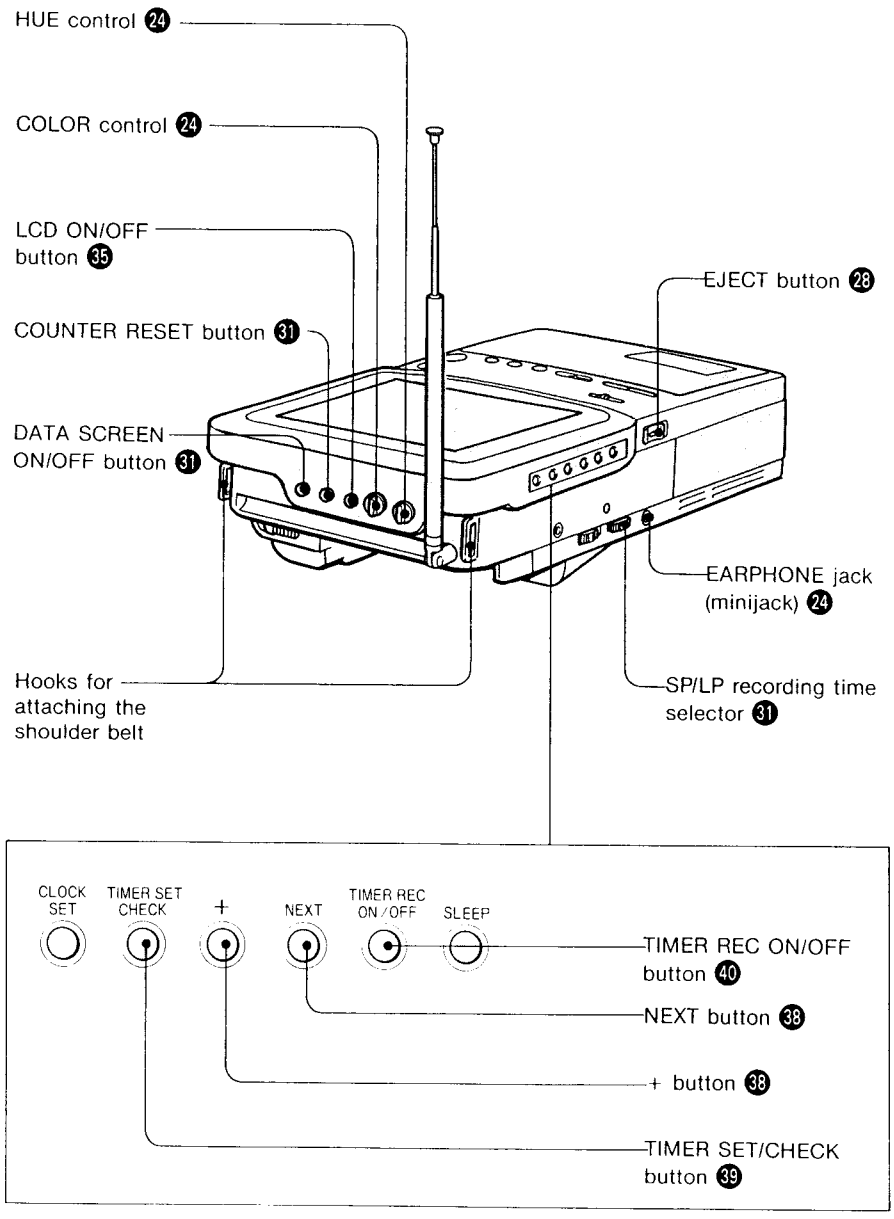


Refer to the pages indicated in ● for details.



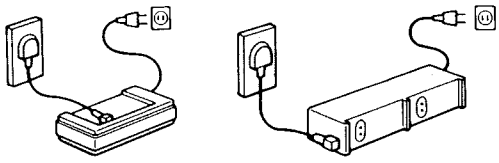
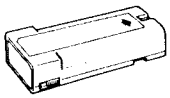
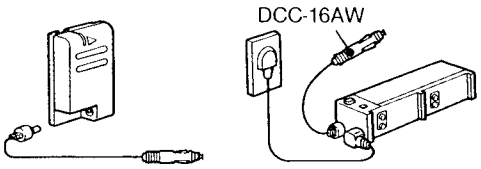
Parts for VCR playback/recording


TIMER REC (timer recording) lamp 40
VOLUME control 35
BRIGHT (brightness) control 24
POWER switch and lamp 34
VIDEO/AUDIO OUT jacks (phono jack) 45 – 50
RFU DC OUT jack (special minijack) 48
VIDEO/AUDIO IN jack (phono jack) 45 – 50
Cassette holder 28
CAMERA connector (12-pin: 6V) 46
INPUT SELECT switch 30
Tape transport buttons
II (pause) button and lamp 31 36
□ (stop) button 31 35
RECORD
▷ (play) button 34
RECORD switch and lamp 30
▶▶ (fast-forward) button 35 36
◀◀ (rewind) button 35 36


HUE control 24
COLOR control 24
LCD ON/OFF button 35
COUNTER RESET button 31
DATA SCREEN ON/OFF button 31
Hooks for attaching the shoulder belt
EJECT button 28
EARPHONE jack (minijack) 24
SP/LP recording time selector 31
CLOCK SET
TIMER SET CHECK
+
NEXT
TIMER REC ON/OFF
SLEEP
TIMER REC ON/OFF button 40
NEXT button 38
+ button 38
TIMER SET/CHECK button 39

Power Sources

Selection of Power Sources

Place	Power Source	Page
Indoors	AC power adaptor AC-V30 (supplied)* or AC power adaptor AC-V55 	16
Outdoors	Battery pack NP-77 (supplied) or NP-55 or Battery case EBP-55 (with alkaline batteries)	12
	Battery pack NP-22 or NP-22H 	11
In the car	DC pack DCP-55 (with car battery cord) or AC power adaptor AC-V55 with DCC-16AW or the car battery cord supplied with DCP-55 	17

* AC-V30 cannot be used in the car.

All above accessories except the AC-V30 and the NP-77 are optional.

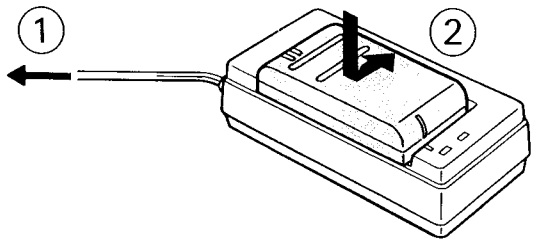
Disconnecting the power source during recording or playback may damage the inserted cassette tape.
If this is done by accident, supply the power again immediately and turn the power on.

Notes

- To use the NP-22 or NP-22H battery pack, use the optional NPA-22 battery adaptor.
- VCV-GV9 Video Walkman Hood (optional) is available.

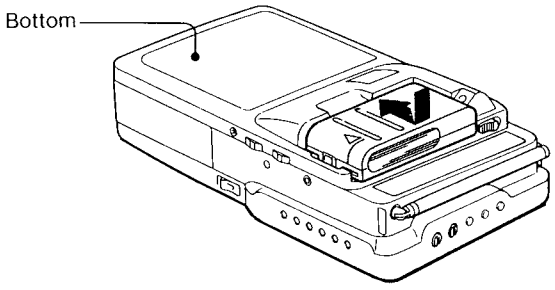
Using with Battery Pack — NP-77 or NP-55

1 First, charge the battery pack.
Use the supplied AC-V30 AC power adaptor.



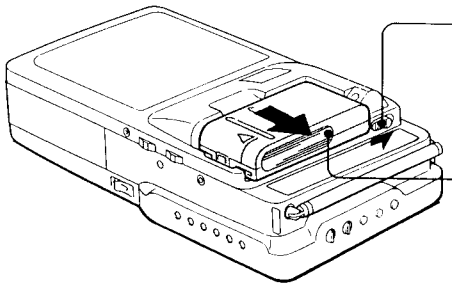
① Connect the AC-V30 to a wall outlet.
② Install the battery pack.
Align the ▮► marks, then while pressing the battery pack, slide the battery pack in the direction of the arrow.
The POWER lamp (green) and the CHARGE lamp (orange) on the AC-V30 will light up. The charging will begin.
When the charging is completed, the CHARGE lamp goes out.
Unplug the AC power adaptor and the POWER lamp will go out.

2 Attach the battery pack to the video TV recorder.
Align the metal projection of the battery pack to the mounting surface of the unit, and slide the battery pack.



- The charging time is about 1 hour for an NP-55 battery pack, or about 2 hours for an NP-77.
- When you attach two battery packs to the AC-V55 AC power adaptor, first the charging of the battery 1 will be made, then the battery 2 will follow.
- The unit cannot be operated with the AC power adaptor when it is used for charging a battery pack, and the battery pack cannot be charged when the AC power adaptor is used to operate the unit.
- An NP-77 or an NP-55 can also be charged with the BC-55 battery charger.

To remove the battery pack



1 While sliding the BATT knob in the arrow direction,

2 Slide the battery pack as illustrated.

How to Use the Rechargeable Battery Pack

Battery life

A fully-charged NP-77 or NP-55 battery pack can operate this unit as follows:

	NP-77	NP-55
Watching TV programs	Approx. 120 min.	Approx. 60 min.
Playback of VCR	Approx. 90 min.	Approx. 45 min.
TV program recording	Approx. 80 min.	Approx. 40 min.
Camera recording*	Approx. 60 min.	Approx. 30 min.

*When the optional CCD-G1 color video camera is connected.

Prepare battery packs of double or triple capacity of planned operating time to be on the safe side.

The "operating time" described in the catalogs and operating instructions of the video TV recorder is the time during which the unit can be used continuously indoors with fully charged battery pack.
Fast winding or rewinding operation of the tape consumes much more battery power than normal tape transport operation. Consequently, battery life becomes shorter when fast winding or rewinding is performed frequently.

The battery life becomes shorter in a cold place.
Battery packs run out more quickly in low temperature.

Charging of the battery pack

The battery pack you have purchased is not charged. Fully charge the battery pack before use.

Recharge the battery pack when it is exhausted.

- If the operation is completed before BATTERY DOWN is indicated, it is recommended that you discharge the battery pack by playing back or recording on another tape until the BATTERY DOWN indication blinks rapidly.
- Do not recharge the battery pack before it has been discharged. Repeated charging while some battery capacity remains will reduce the battery capacity.

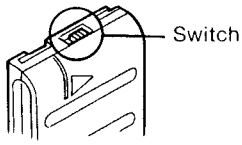
Notes on the battery pack

Battery pack care

- Remove the battery pack from the video TV recorder after use, and keep it in a cool place.
  When the battery pack is installed on a video TV recorder, a slight amount of current flows to the recorder even though the POWER switch is turned off. It causes overdischarge and shortens the battery life.
- The battery pack is always discharging — even when it is not in use.
  Thus, the battery should be charged before each use.

How to use the switch on the battery pack

Use this switch to indicate the charging condition. Set the switch to the "no mark" position when the charging is completed. Set the switch to the "red mark" position when the battery has been discharged.



How many times can the battery pack be recharged?

The battery pack can be recharged more than 500 times provided that it is fully charged and exhausted at each operation.
If the BATTERY DOWN indication blinks rapidly after turning on the recorder even though a fully charged battery pack is installed, the battery pack should be replaced with a brand new one.

Charging temperature

The battery pack should be charged in a temperature ranging from 10°C to 30°C (5°F to 85°F).

The battery pack will be warm after charging or using.

While the battery pack is charged or used, a chemical change which generates electric energy occurs inside the battery pack. Therefore, the battery pack becomes warm, and this is normal.

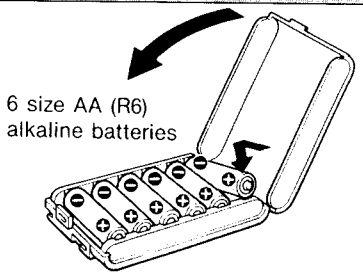
When the charging is completed, remove the battery pack from the charger.

Within 24 hours after charging, remove the battery pack from the charger. Otherwise, overcharging may occur as a slight amount of current flows from the charger to the battery pack.

Be sure to put the battery pack in the case to carry.

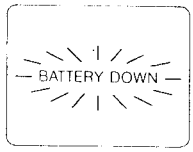
If the + and − terminals are short-circuited with a metal piece, the battery will be abnormally heated. This is very dangerous. Never put an uncovered battery pack in a pocket together with a key holder, etc.

Using With Battery Case — EBP-55



- Attach or remove the battery case to the unit in the same way as the battery pack.
- For playing back, continuous power for 35 minutes can be provided.
- You cannot use normal batteries. Use only alkaline batteries.
- If you use the battery case in a cold place, its operating time becomes shorter.
- When you use the battery case to operate the video TV recorder, occasionally the displays on the screen may not blink.
- If you cannot remove the cassette from the unit, replace the batteries with new ones.

Replacing the battery



Fast blinking

Replace the battery just when the POWER lamp and BATTERY DOWN on the screen changes from slow blinking to fast blinking.
Turn off the power of the video TV recorder before replacing the battery. While replacing the battery, keep the cassette inside the cassette holder. Recording can be resumed smoothly without any picture distortion.

Charging temperature

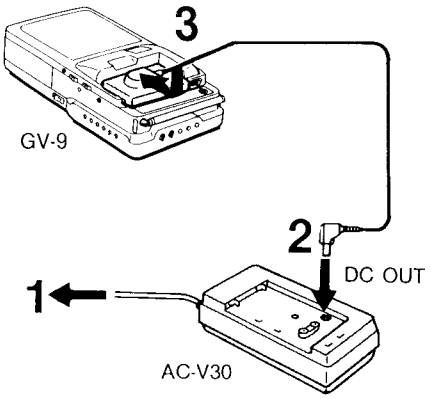
The temperature range for charging is 5°C to 35°C (41°F to 95°F).
However, to provide maximum battery efficiency, the recommended temperature range when charging is 10°C to 30°C (50°F to 86°F).

Keep the battery terminals clean.

If the terminals are soiled, the battery life will become shorter.
When the terminals are soiled, or the battery pack or case has not been used for a long time, repeat attaching and removing it several times. This will improve the contact of the battery pack or case and the video TV recorder.
Also, wipe the + and – terminals with a soft cloth or paper.

Using with AC Power Adaptor — AC-V30

1 Connect the AC power adaptor to a wall outlet.
2 Insert into the DC OUT jack.
3 Install the other side of the connecting cord to the video TV recorder.



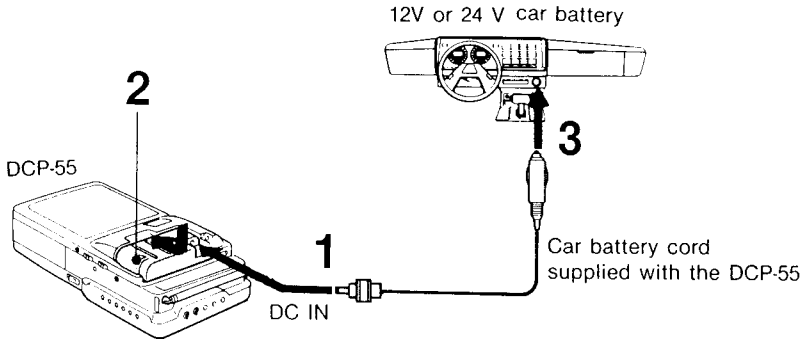
- The optional AC-V55 can also be used.
- Attach or remove the AC power adaptor in the same way as the battery pack.
- When disconnecting, do not pull the cord.

CAUTION
TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

- The unit is not disconnected from the AC power source as long as it is connected to the wall outlet.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the wall outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- While the unit is in use, particularly during charging, keep it away from AM receivers and video equipment because it will disturb AM reception and video operation.

Using with Car Battery — DCP-55

1 Insert into the DC IN jack of the DC pack.
2 Attach to the video TV recorder.
3 Connect to the cigarette lighter socket.



- The optional AC-V55 or the NP-4000 (battery pack) can also be used to operate this unit. In this case, connect it to the cigarette lighter socket of the car with the optional DCC-16AW car battery cord. The AC-V30 cannot be used in a car.
- Attach or remove the DC pack in the same way as the battery pack.

Notes

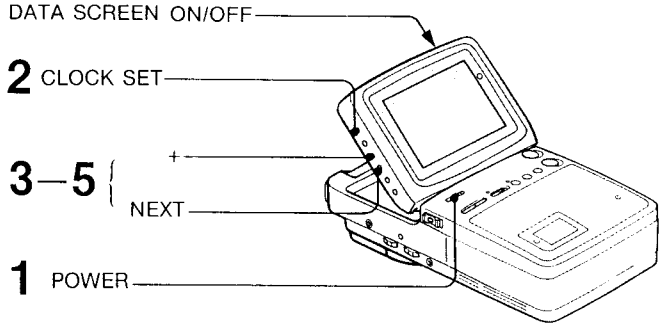
- Be careful not to let any metal object touch the metal projection on the battery pack or the AC power adaptor. When the battery pack is not used, keep it in its case.
- Keep the video TV recorder away from the power source. If not, noise may appear on the screen.

Notes on the use of the GV-9 in a car

- When you use the DCP-55 or AC-V55, connect them only to the cars with negative ground 12V or 24V car battery.
- For your safety, do not watch the TV or operate the controls while driving.
- Avoid leaving the unit in a place with very high temperature. If you do, it may cause distortion of the cabinet or malfunction of the unit.
- If you use this unit while your car is not in use, the car battery will be consumed.
  Avoid using this unit in such condition over 12 hours.

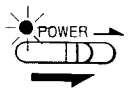
Setting the Clock

Note on time indication
PM 12:00 = midnight, AM 12:00 = noon



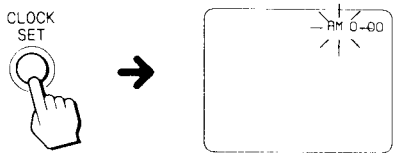
Example: Set to PM 1:15

1 **Slide POWER to the right and release to turn on the unit.**
The POWER lamp lights up.



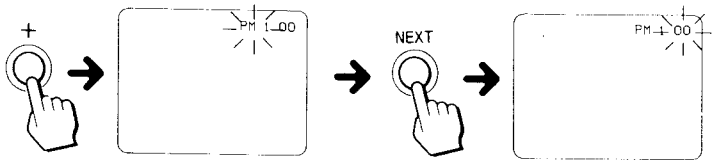
2 **Press CLOCK SET.**

The screen becomes dark.



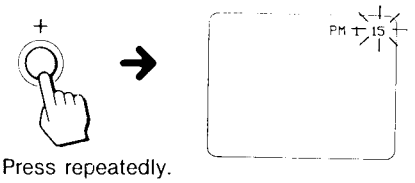
The next item to be set blinks.

3 **Set the hour.**
Press repeatedly until you get the correct setting.



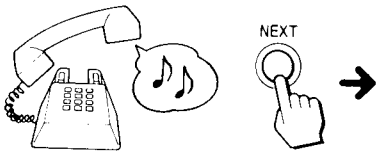
When you press and immediately release the + button, the indication will advance by one. If you keep the button pressed, the indication will advance continuously.

4 **Set the minute.**



Press repeatedly.

5 **Press NEXT at the same time as an annouced time signal.**



The clock starts.

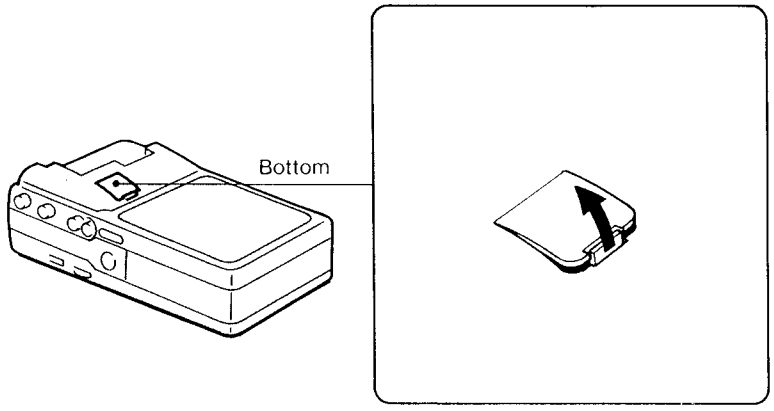
The screen goes back to the normal brightness.*

*If the time indication was not displayed on the screen when you started setting the clock, the display goes off as the setting is completed. But, if the time indication was displayed by pressing DATA SCREEN ON/OFF when you started the setting, the display remains on the screen. To make the display disappear, press DATA SCREEN ON/OFF.

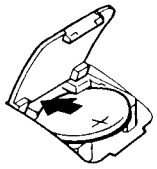
Inserting a Lithium Battery

This unit uses a lithium battery to activate the clock when the external power source is disconnected.

1 **Open the cover of the lithium battery compartment.**



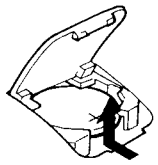
2 **Install the supplied CR2032 lithium battery with the + side facing out.**



3 **Close the cover.**

To remove the lithium battery

Press the side of the battery in the direction as indicated for installation and lift it.



Lithium battery life

Approximately 1 year in normal operation.
If the lithium battery becomes weak, the time indication will blink on the screen for several seconds when the power is turned on. In this case, replace the battery with a Sony CR2032 lithium battery.
Use of a battery other than Sony CR2032 lithium battery may present a risk of fire or explosion.
After replacing the battery, the clock display becomes AM 12:00. Reset the clock.

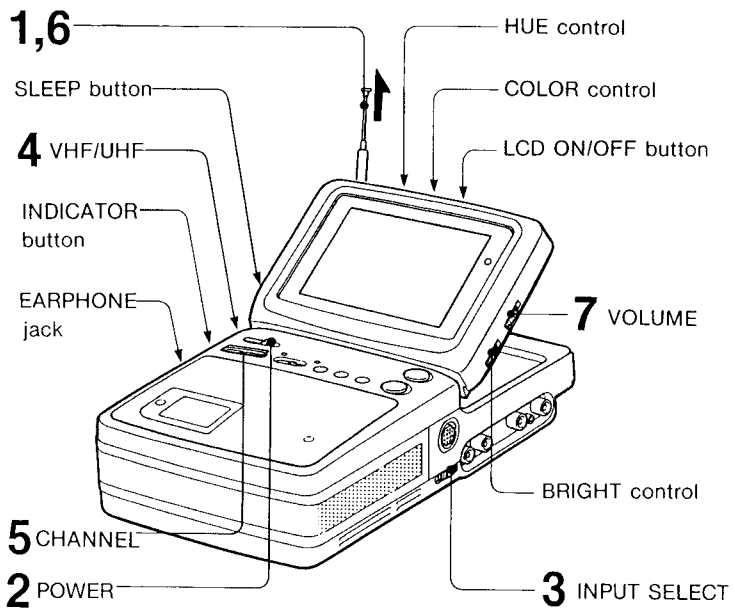
Notes on lithium battery

- Keep the lithium battery out of the reach of children.
  Should the battery be swallowed, immediately consult a doctor.
- Wipe the battery with a dry cloth to assure a good contact.
- Be sure to observe the correct polarity when installing the battery.
- Do not hold the battery with metallic tweezers, otherwise a short-circuit may occur.
- Do not break up the battery nor throw it into a fire, which might cause it to explode. Carefully dispose of the used batteries.

WARNING

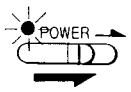
Battery may explode if mistreated. Do not recharge, disassemble or dispose of it in fire.

Watching TV Programs



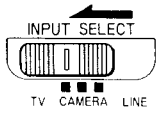
1 **Pull out the antenna fully.**
When you have connected an external antenna, be sure to fold the telescopic antenna.

2 **Turn the power on.**



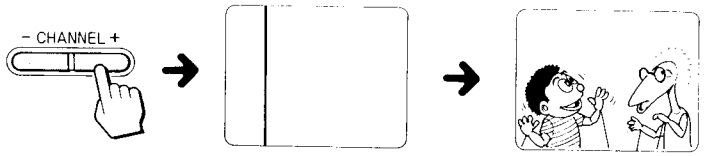
The POWER lamp lights up.

3 **Set INPUT SELECT to TV.**



4 **Select VHF (Channel 2 – 13) or UHF (Channel 14 – 69).**

5 Select the desired channel.

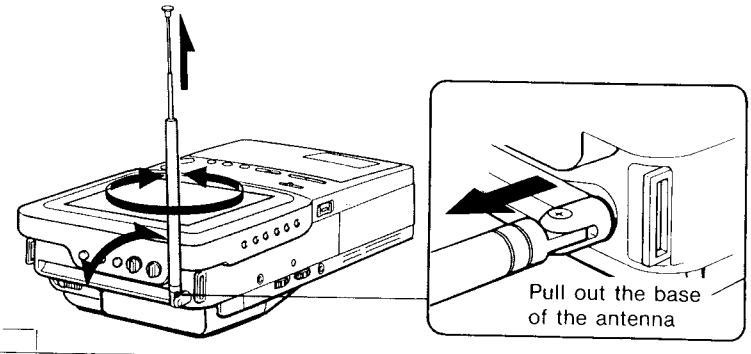


A vertical line (VHF: green, UHF: red) appears and moves while the unit is searching for the channel and stops when the channel is tuned in.

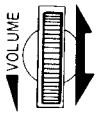
The vertical line disappears after several seconds.

Press + for higher-numbered channels and – for lower-numbered channels. The channels will appear in numerical sequence. Press CHANNEL +/– repeatedly until you get the desired channel on the screen.

6 Adjust the antenna for the best reception.



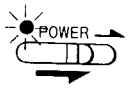
7 Adjust the volume.



To increase volume.

To decrease volume.

To turn off the TV

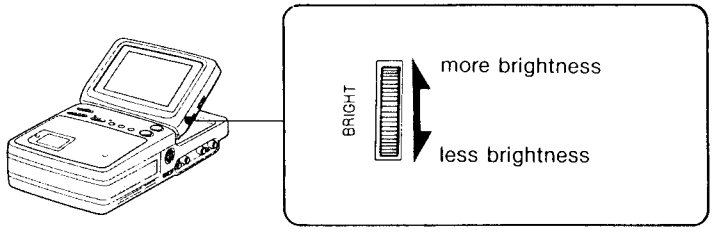


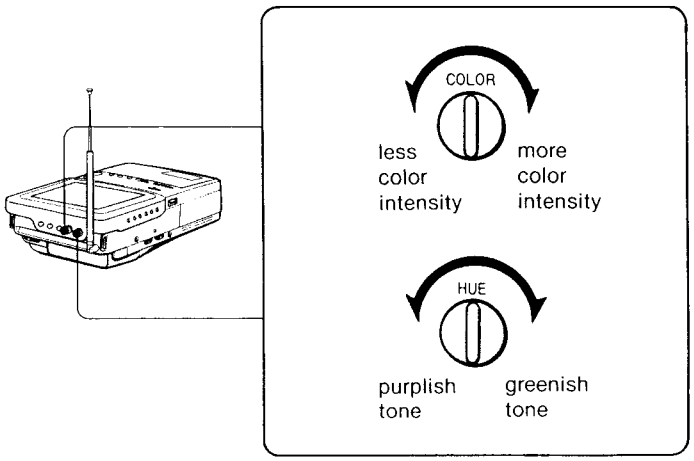
Slide POWER to the right and release. The lamp goes off.

To listen with headphones

Connect the supplied headphones to the EARPHONE jack.
The sound from the speaker will be cut off.
The supplied headphones are of stereo type, but the sound will be heard through both right and left sides in monaural.

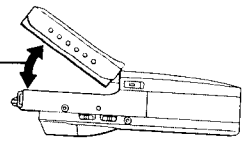
To Adjust the Picture





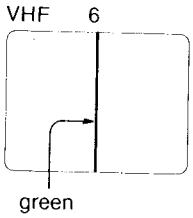
Adjust the above controls to your preference.

Adjust the angle of the LCD to your preference.



To know the channel you are watching

Press INDICATOR.



If the vertical line is green, you are watching a VHF channnel.
If it is red, you are watching a UHF channel.

You know that you are watching VHF channel 6.

To mute the picture

Press LCD ON/OFF.

The picture will be muted.

It is recommended that you mute the picture when you view the playback picture of this recorder with another TV or monitor.
Battery life will be longer if you use the unit with the picture turned off.

"Last channel" memory function

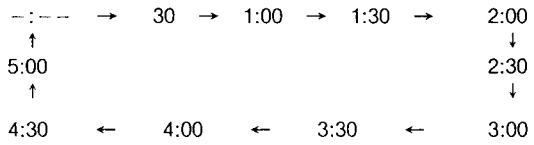
- While you are watching the TV, if the power source is disconnected or the battery pack becomes exhausted, the unit turns off with the last channel being memorized.
  When you turn on the unit again, the last channel will appear on the screen.
- The same thing occurs when the TV signal is cut off, for example when you go through a tunnel.

Note

When no picture is displayed, if the sound is set to a low volume, or the headphones are connected, the unit seems to be turned off though it is not.
Be sure to turn off the unit with the POWER switch when it is not used.

To Have the Unit Turned off Automatically — SLEEP Timer

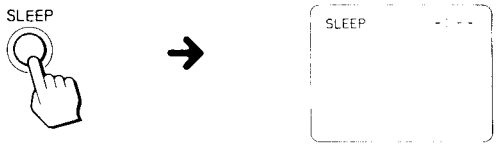
You can set the unit to turn off automatically after a certain time between 30 minutes and 5 hours while viewing a TV program or video playback , or while recording.
Each time you press the SLEEP button, the display changes as follows:



Example: To turn off the TV after 2 hours

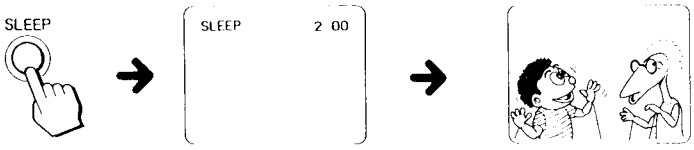
1 Make sure the clock is set correctly (page 18).

2 Press SLEEP while watching the TV, etc.



The screen becomes dark.

3 Select the desired time interval by pressing SLEEP.



The screen goes back to the normal brightness after several seconds.

The TV will be turned off automatically after 2 hours.

The operation will be the same for the tape playback and recording.
The tape will stop running after the selected time interval.

To check the remaining time

Press SLEEP once.

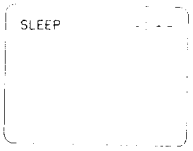
The remaining time is displayed.

Note

When you use the unit with rechargeable batteries, the unit may be turned off before the selected time because the batteries are exhausted.

To stop the SLEEP timer

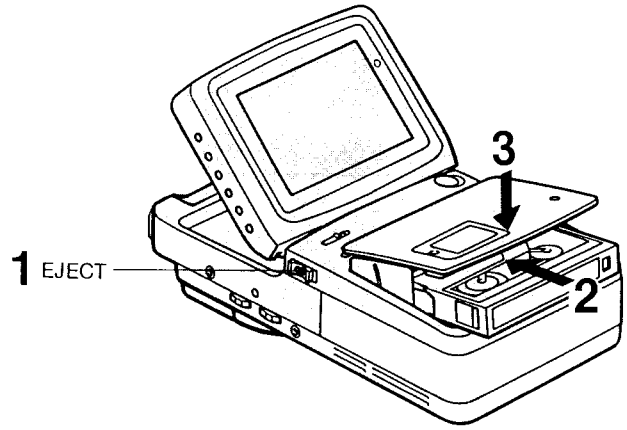
Press SLEEP repeatedly until you have the "–:––" display.



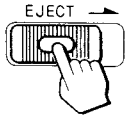
You can also stop the SLEEP timer by turning off the unit with the POWER switch.

Inserting the Cassette

Make sure that the power source is connected to the unit.



1 Open the cassette holder with the EJECT button.



While pressing,
slide to the right.

2 Insert the cassette with the window side up.

3 Close the cassette holder.

When you slide the EJECT button, the power will be supplied and the cassette holder will be opened even if the power is turned off. When the cassette holder opens, the power will be turned off automatically. Press POWER if you want to continue the operation after closing the cassette holder.

To eject a cassette

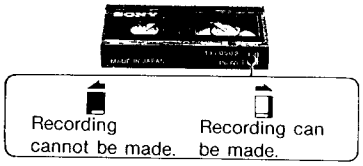
Use the EJECT button. Make sure the tape is not running.

Note

Do not open the cassette holder while the unit is in the vertical position. If you do, the cassette may fall out of the holder and the cassette can be damaged.

To Prevent Accidental Erasure

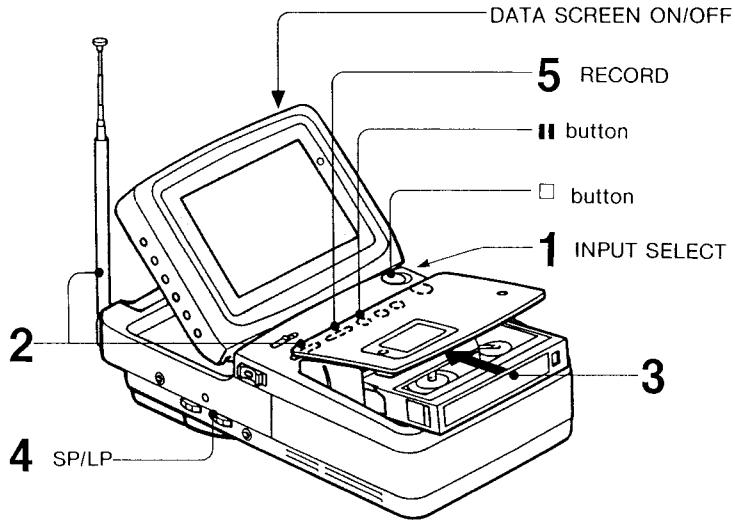
When a new recording is made on a previously recorded tape, the previous recording is automatically erased. To protect a recording, slide the safety tab out to cover the opening.



Notes

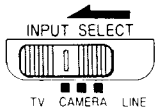
- When opening and closing the cassette holder, do not push the cover of the holder forcibly.
- When you have made a recording with this unit on a tape from its beginning, and if you play back this tape with another VCR, the beginning of the tape may not be played back.
  Also, by using the same tape for recording, the previously recorded pictures can remain although you record the new pictures.
  To avoid these cases, advance the tape for about 15 seconds before recording with this unit.
- Store cassettes in their cases when they are not to be used and keep them in an upright position to prevent intrusion of dust and uneven winding.
- Always insert the cassette in the right position.
- Never insert anything in the small holes on the rear of the cassette.

Recording TV programs



For better picture and sound quality, we recommend you connect an external antenna. (See page 43.)

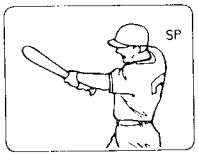
1 **Set INPUT SELECT to TV.**



2 **Select the desired TV channel (see page 22).**

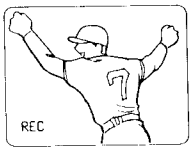
3 **Insert a cassette (see page 28).**

4 **Select the recording mode, SP or LP (see page 33).**

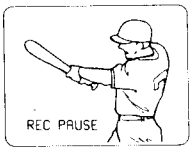


5 **Slide RECORD to the right and release to start recording.**

The RECORD lamp lights up.

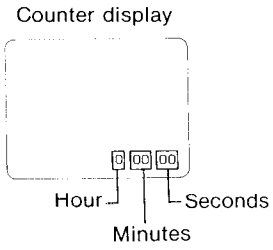


To stop recording for a moment	Press ❚❚. The lamp lights up. Press again to resume recording. (The pause mode will be released after about 5 minutes to protect the video heads and recording will stop.)
To stop recording	Press □ (STOP). The RECORD lamp goes off.
When the tape is recorded to the end	The tape stops. The unit is not turned off.



To index the tape

Use the counter display on the screen.
Keep the counter displayed by pressing DATA SCREEN ON/OFF.



Press COUNTER RESET to reset the counter to 0:00:00 at the beginning of the tape. Note the counter reading at the desired points. Refer to these readings to locate the desired points later.

About the recorded sound

The VOLUME control setting has no effect on the recording level.

To change the channel during recording

Set the unit in the recording pause mode by pressing ❚❚ and then select another channel.
You cannot watch another program while recording.

Are you having trouble?

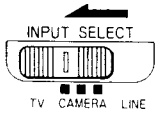
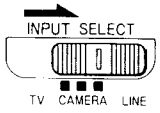
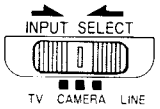
Symptom	Possible cause	Correction
"CASSETTE" indication is displayed when you slide the RECORD switch.	The safety tab on the cassette is slid out.	Slide the tab in or use a new cassette.
	The tape is at its end.	Rewind the tape or use a new cassette.
	No cassette is inserted.	Insert a cassette.

To stop recording at the desired time — Quick timer

Press the SLEEP button during recording. You can leave the unit function when you go to bed or when you go out, etc.
The unit will be turned off automatically at the preset time. For operation, see page 26.

About the INPUT SELECT switch

Set to the appropriate position according to the source to be watched or to be recorded.

To watch or record TV programs	To watch or record signals from the equipment connected to the VIDEO/AUDIO IN jacks	To watch or record signals from a video camera connected to the CAMERA connector
Set to TV. 	Set to LINE. 	Set to CAMERA. 

Recording/playback time

Two tape speeds can be selected with the SP/LP selector.
The recording time in the LP mode is twice as long as that in the SP mode. For better picture and sound, recording in the SP mode is recommended. During playback, the mode in which the tape was recorded is selected automatically.

Cassettes and their recording time

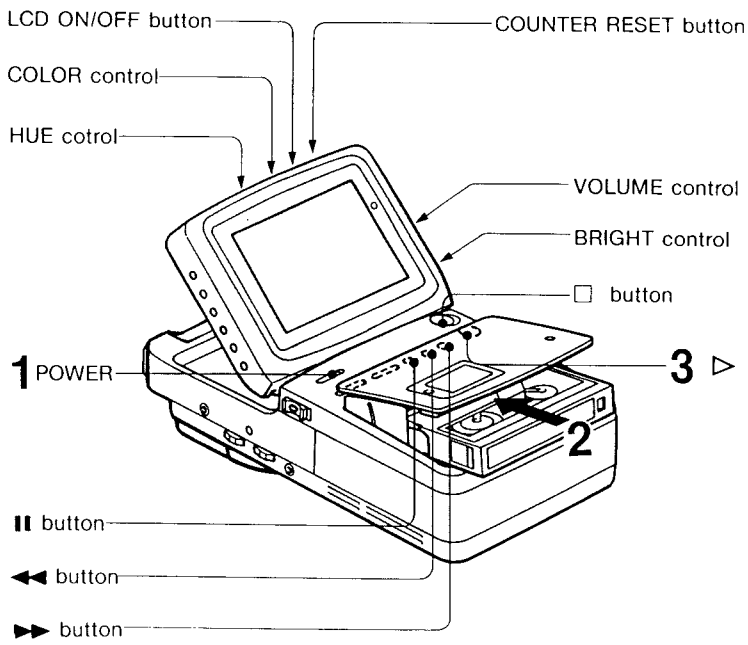
There are two formats for 8 mm video recording, NTSC and PAL. Video cassette tapes are made to correspond to the respective formats. Use NTSC format cassette tapes for GV-9. You will find "P6" on the package of the cassette.
In some countries, however, only PAL format cassette tapes with "P5" on the packages are available. If a PAL format cassette is used with this unit, the actual recording time may differ from the standard recording time indicated on the cassette.
For your reference, the recording times for NTSC and PAL format cassettes are as follows:

NTSC cassettes			PAL cassettes		
	Recording time			Recording time	
Cassette	SP mode	LP mode	Cassette	SP mode	LP mode
P6-15	15 min.	30 min.	P5-15	22 min.	44 min.
P6-30	30 min.	60 min.	P5-30	43 min.	86 min.
P6-60	60 min.	120 min.	P5-60	84 min.	168 min.
P6-90	90 min.	180 min.	P5-90	126 min.	252 min.
P6-120	120 min.	240 min.			

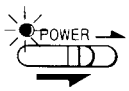
Note

If you record with this unit on a tape which has been recorded in the PCM mode, and if you play back this tape by using a VCR with PCM function, occasionally the sound may be cut off. In this case, set the audio monitor switch of the VCR to the standard position.

Playing Back the Recorded Tapes

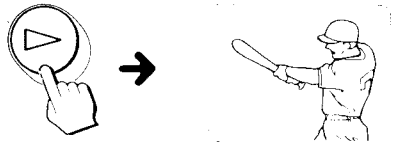


1 **Turn the power on.**
The POWER lamp lights up.



2 **Insert a recorded tape (page 28).**

3 **Press ▷ to start playback.**



4 Adjust the volume.

To mute the picture

Press LCD ON/OFF.

To adjust the picture

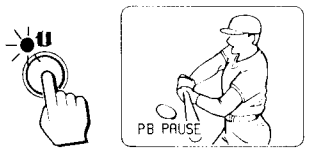
Adjust the BRIGHT, COLOR, and HUE controls (page 24).

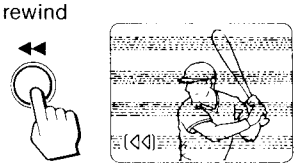
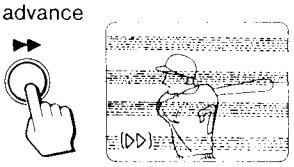
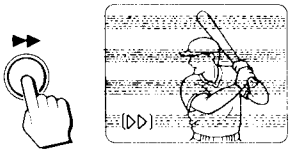
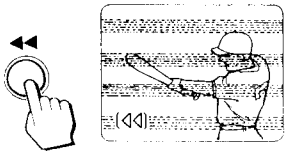
To stop the playback at the desired time

Use the SLEEP function.
You can have the unit turned off at the preset time. See page 26.

		On-screen display
To stop playback	Press □.	—
To rewind the tape and play it back automatically — Auto play	Keep ◀◀ pressed and press ▷.	AUTO PLAY
When the tape is played to the end	The tape stops. The unit is not turned off.	—
To advance the tape rapidly	Press ▶▶.	▷▷
To rewind the tape	Press ◀◀.	◁◁

Various Playback Modes

<table>
<tr><td rowspan="4">During playback</td><td>To stop the tape for a moment — Still picture</td><td> 

The lamp lights up.</td><td>To resume normal playback, press ❚❚ again, or press ▷. The pause mode will be automatically released after about 5 minutes and playback will resume.</td></tr>
<tr><td>To locate a particular point while viewing the picture — Picture search</td><td>To rewind
 
To advance
  </td><td rowspan="3">When you release the button, the unit will return to the previous mode.</td></tr>
<tr><td>When the unit is in the fast forward mode</td><td rowspan="2">To view the picture at high speed — FR picture search</td><td>  </td></tr>
<tr><td>When the tape is being rewound</td><td>  </td></tr>
</table>

Notes

- In the still picture, picture search or picture at high speed, streaks will appear and the sound will be muted.
- Picture noise will increase when you play back a tape recorded in the SP mode.
- If you make the picture search or the FR picture search with another TV or monitor, the picture may be in black and white, or the picture may shake vertically, also, streaks will be larger than those that appear in the pictures viewed on this unit.

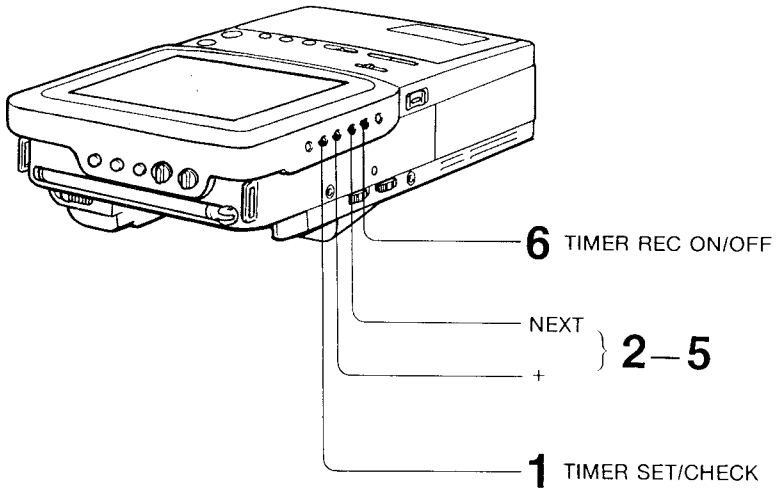
To Start Recording at the Desired Time

A TV program within 24 hours can be preset for automatic recording.

Before setting the timer

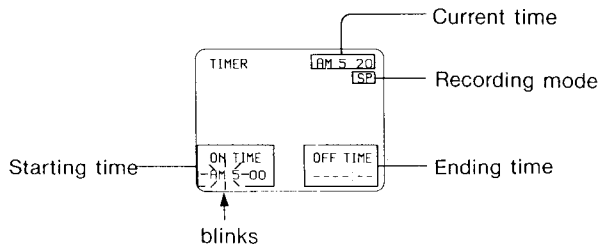
- Make sure that the power is supplied: is the battery pack fully charged? (For long recording, using the AC power source is recommended.)
- Set the clock (Page 18).
- Insert a cassette (Page 28). Make sure that the safety tab is slid in.
- Select the recording mode, SP or LP.
- Set the INPUT SELECT switch to the appropriate position. To record TV programs, set to TV.
- Select the desired channel for TV program recording.
  For better recording of picture and sound, using an external antenna is recommended. See page 43.

To set the timer



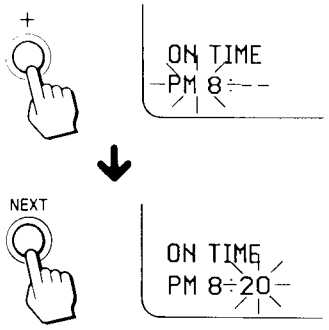
Example: To record the program from 8:30 pm to 9:45 pm

1 **Press TIMER SET/CHECK.**
The screen becomes dark.



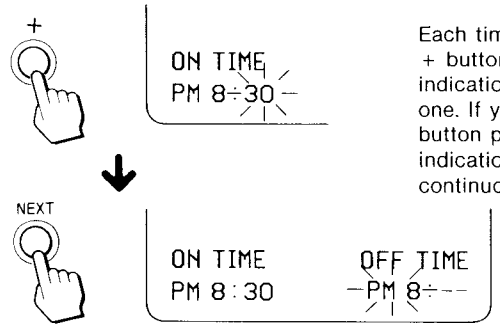
Setting the starting time

2 **Set the hour.**



Each time you press the + button, the hour indication increases by one.
If you keep the button pressed, the indication will increase continuously.

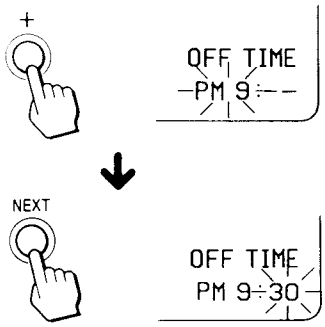
3 **Set the minute.**



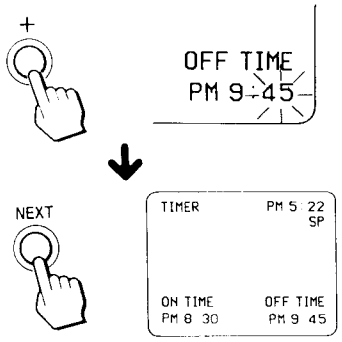
Each time you press the + button, the minute indication increases by one. If you keep the button pressed, the indication will increase continuously.

Setting the ending time

4 Set the hour.



5 Set the minute.



The screen will go back to the previous state in a few seconds.

6 Press TIMER REC ON/OFF.

The power will be turned off.
The TIMER REC lamp lights up.

Recording starts at the preset starting time and the power is turned off at the ending time.

If the safety tab on the cassette is slid out or if no cassette is inserted when you press the TIMER REC ON/OFF button, "CASSETTE" indication will appear.

Note

Be sure to press the TIMER REC ON/OFF button only after you have finished the timer settings. If you press it while presetting, the power turns off at this point and the preset program is erased.

During timer recording, both picture and sound will be muted. To listen to the sound and watch the picture, press LCD ON/OFF.
When the TIMER REC lamp is lit, any buttons except for the TIMER REC ON/OFF button and the TIMER SET/CHECK button do not function.

To stop the timer recording

Press TIMER REC ON/OFF again.

If a power interruption occurs when the unit is connected to the AC power source

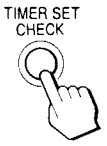
Recording will stop. The power will not be turned on even when the interruption ends.

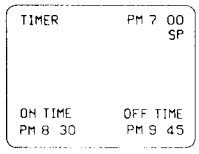
To set the timer while the tape is running

You can set the timer during playback or recording.
In this case, advance or rewind the tape to the desired position before pressing the TIMER REC ON/OFF button in step 6.

To check the setting

Press TIMER SET/CHECK while the TIMER REC lamp is lit.
The power is turned on and the turn-on and turn-off times will be displayed.





If you have made a mistake in timer setting

Press TIMER REC ON/OFF to cancel the timer recording, then turn the unit on and set the timer again.

If the turn-on and turn-off times are the same

You can record to the end of the tape.
If the tape ends before the turn-off time, recording will stop and the power will be turned off.

Note

- The timer recording cannot be made on AC power when the AC power adaptor is used for charging a battery pack. Before setting the timer, finish charging the battery pack.
- When using the unit with the optional AC-V55 AC power adaptor, timer recording can be made after charging has been completed (see fig. 1). However, if the charging time overlaps the time set for timer recording, the timer recording will not start (see fig. 2). Set the timer so that charging will finish before the timer recording ON TIME.

Fig.1

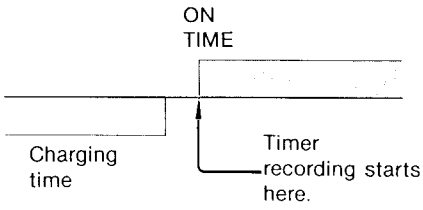
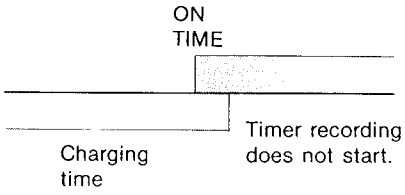


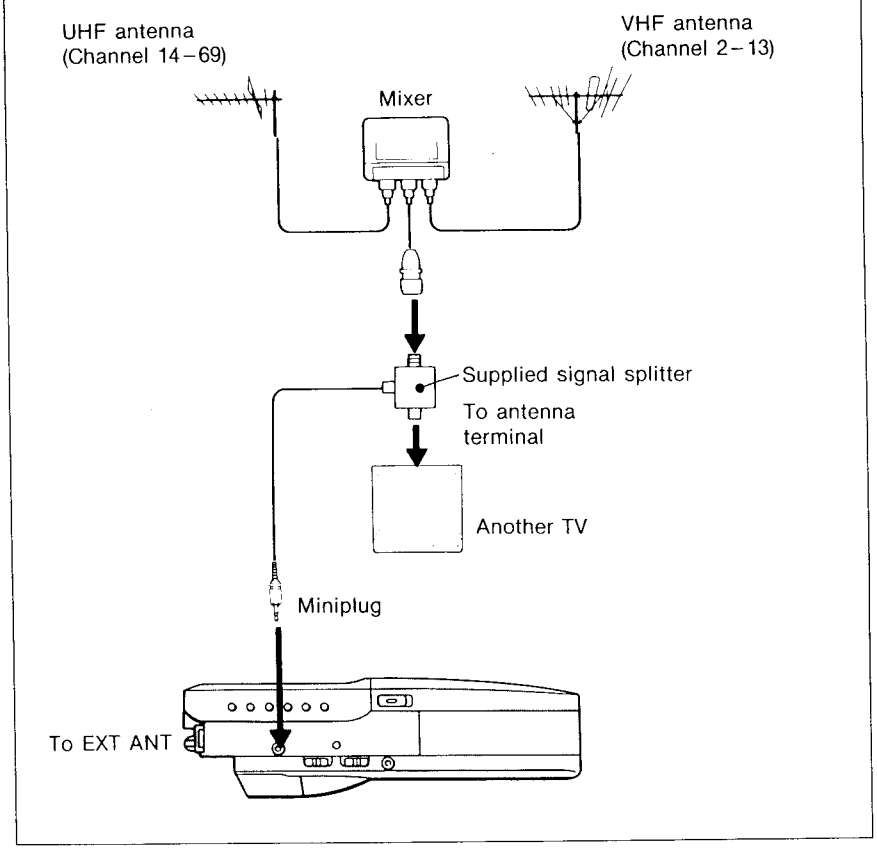
Fig. 2



Connecting an Outdoor Antenna

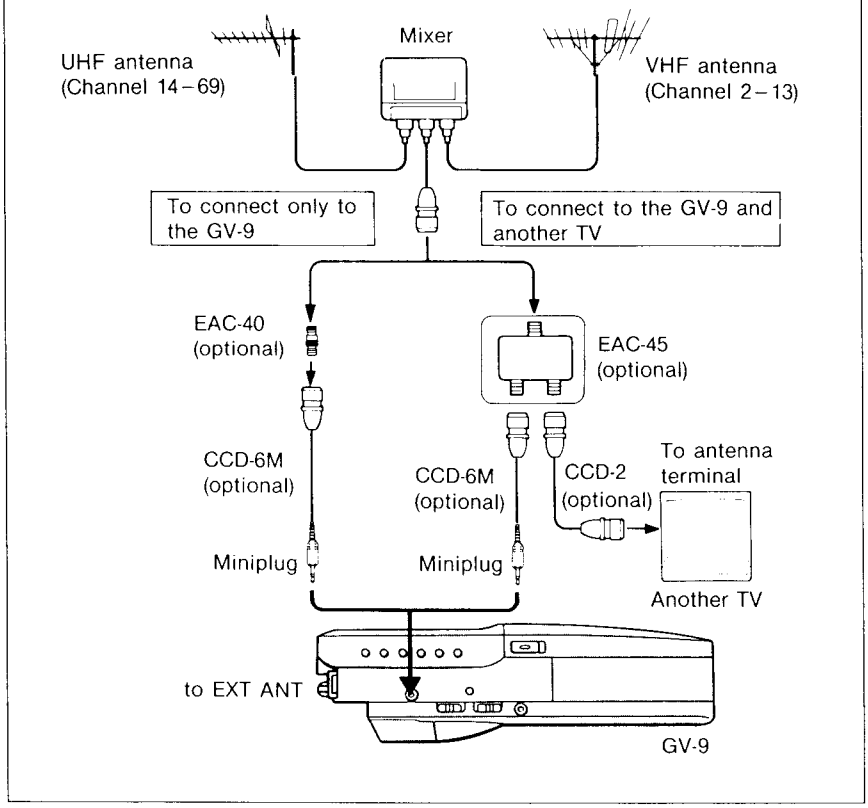
If you cannot obtain satisfactory reception with an indoor antenna, or when recording TV programs, use an outdoor antenna.

Using the Supplied Signal Splitter



Note to CATV system installer:
This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in partiular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Other Connections

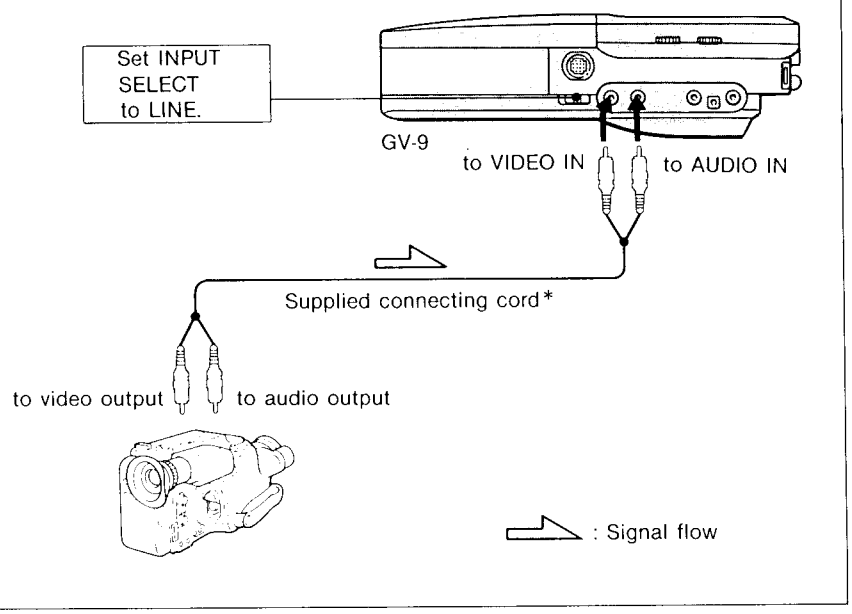


Notes

- Before connecting the antennas, turn off the unit.
- Make connections firmly. A loose connection may cause a distorted picture.
- When using the unit in a car, use the optional VCA-3W or VCA-4E car antenna, etc. For details, refer to the instruction manual of the car antenna.

Using as a Monitor of the 8mm Video Camera Recorder

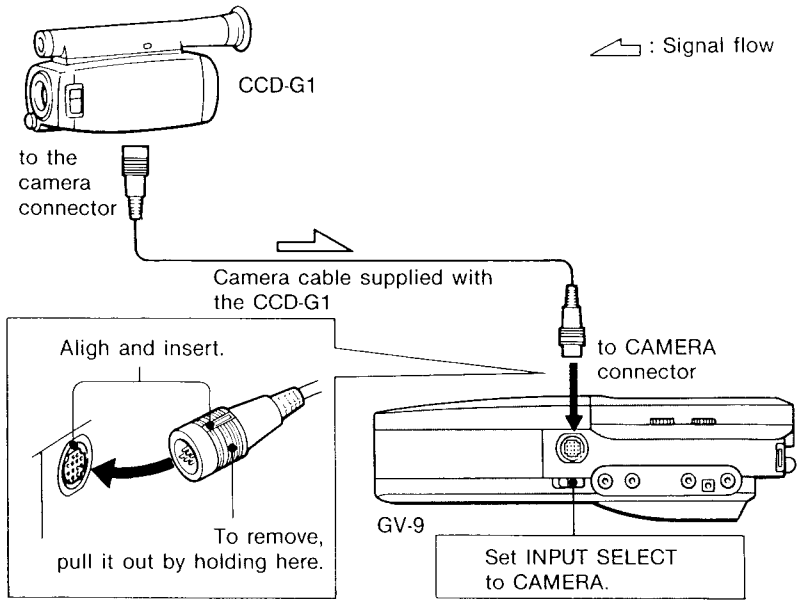
With the following connection, you can view pictures being recorded by the connected video camera recorder. Also you can view the playback pictures from the video camera recorder on this unit.



*The optional VMC-710M/720M connecting cord can be used in place of the supplied cord.

Recording Pictures with a Video Camera

If you connect the optional CCD-G1 video camera, you can record pictures easily and view the playback pictures immediately. For details, see the instruction manual of the CCD-G1.



Operation

1 **Turn on the GV-9.**

2 **Insert a cassette and set the unit in the recording pause mode.**
(Slide the RECORD switch to the right and release.)

3 **Focus.**

4 **Press the REC START/STOP button on the camera.**

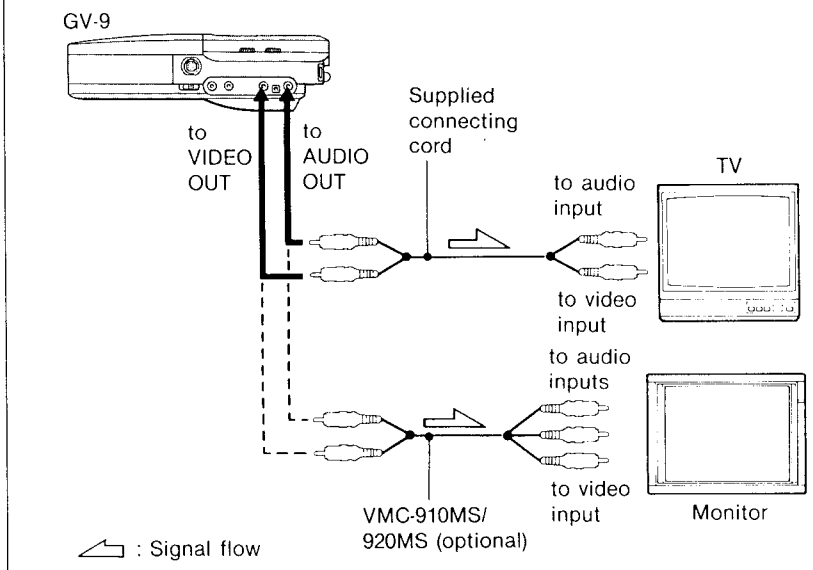
Notes

- If you record while monitoring the pictures and sound being recorded, lower the volume or connect the headphones. Otherwise, the sound from the speakers will be re-recorded by the microphone of the video camera which will cause "howling".
- When connecting the CCD-G1, the display disappears during fast forward and rewinding. The display appears again when fast forward and rewinding is completed or stopped.
- When you record pictures with CCD-G1 using EBP-55, it is recommended to mute the picture by pressing LCD ON/OFF. Please note that the battery life of EBP-55 is short.

To Connect Another TV or Color Monitor

If you connect this unit to another TV or color monitor, you can view the playback pictures or the selected TV program on a larger screen.

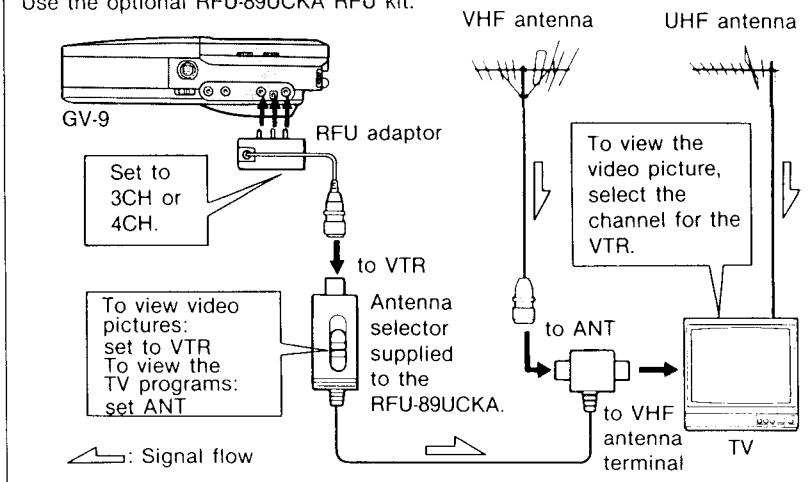
To Connect a TV/Monitor with Video and Audio Inputs



Press LCD ON/OFF on the GV-9 so that the picture is muted.

To Connect a TV with Only the Antenna Terminals

Use the optional RFU-89UCKA RFU kit.



Press LCD ON/OFF on the GV-9 so that the picture is muted.

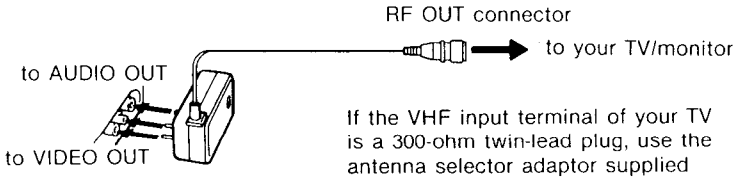
About the optional RFU-89UCKA RFU kit

The RFU-89UCKA includes the following accessories.
— RFU adaptor (1)
— Antenna selector (1)
— Antenna selector adaptor (1)

Channel for VTR

To view the playback picture of this unit, set the antenna selector of the RFU kit to 3 or 4 channel whichever channel is not active in your area and select the same channel on the connected TV.

To connect the RFU adaptor

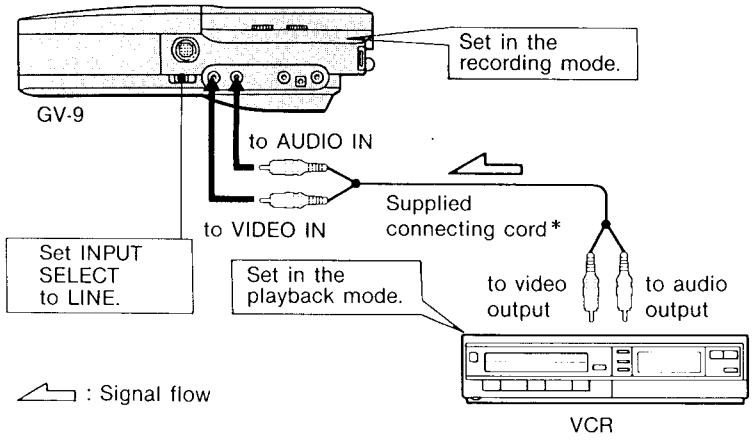


If the VHF input terminal of your TV is a 300-ohm twin-lead plug, use the antenna selector adaptor supplied with the RFU kit.

Tape Editing

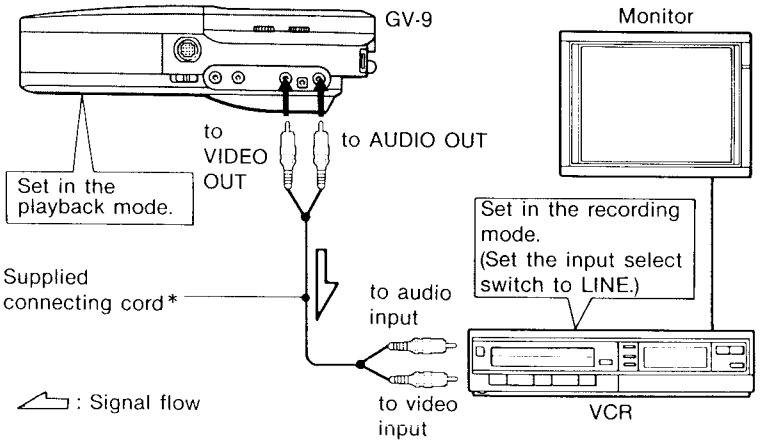
Tapes can be edited when another VCR (8 mm, 8 or VHS format) equipped with video/audio inputs is connected.

To Edit from Another VCR to This Unit



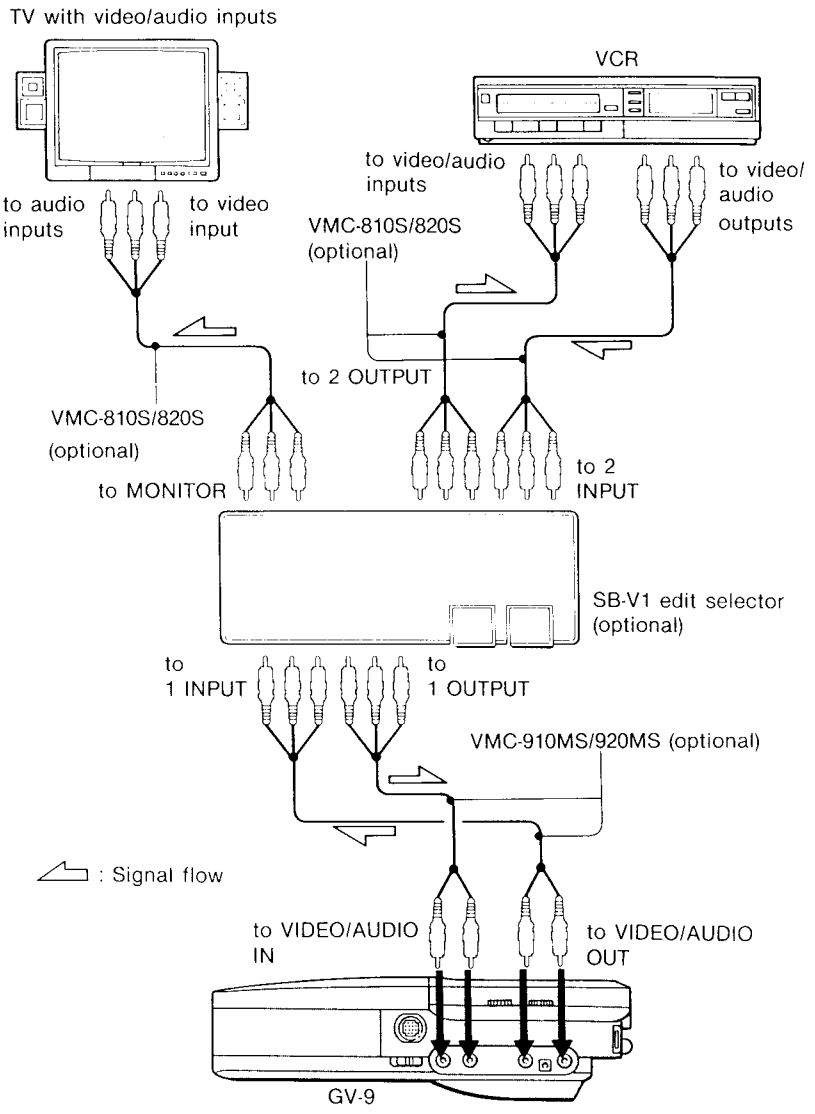
*If another VCR has stereo outputs, use the optional VMC-910MS/920MS connecting cord.

To Edit from This Unit to Another VCR



*If another VCR has stereo inputs, use the VMC-910MS/920MS connecting cord.

Connecting to the Existing System



By switching the selectors on the SB-V1, you can view the playback picture of the GV-9 with another TV or view the playback picture of another VCR with the GV-9, etc. Also, tapes can be easily edited between the GV-9 and the connected VCR.
For details, refer to the instruction manual of the SB-V1.

Precautions

Operation

- Operate the unit on 6–8.5V DC.
- For DC or AC opration, use the accessories recommended in this manual.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Avoid rough handling or mechanical shock to the unit.
- Do not apply excessive force to the LCD.
- Remove and store video cassettes after recording or playback.
- Do not wrap up the unit and operate it because heat may build up internally.
- Avoid using and storing the recorder in the following locations.
  — Locations susceptible to vibration.
  — Locations exposed to strong magnetic fields.
  — Locations near TV or radio transmitters where strong radio waves are generated.
- Do not put the unit on the sand.

Care

- When the unit will not be used for a long period of time, periodically turn on the power, operate the recorder and play back a tape for about three minutes.
- Clean the recorder body with a dry, soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent which may damage the finish.

Notes on Moisture Condensation

If the unit is brought directly from a cold to a warm location, moisture may condense inside the unit. In this condition, the tape may adhere to the head drum and be damaged or the unit may not operate correctly. To prevent possible damage under these circumstances, the unit is furnished with moisture sensors.

If moisture is present inside the unit, the DEW indication flashes on the screen when you press a tape transport button.
Only the EJECT button functions at this time. (Watching TV is possible.)

↓

Eject the cassette and turn off the unit and leave it with the cassette holder open at least for one hour.

↓

The unit can be used again if the DEW indication does not appear when a tape transport button is pressed.

Using Your Recorder Abroad

If you prepare fully charged battery packs and the supplied AC power adaptor (which can be used in all areas with the local power supply of 100V-240V,) you can use your recorder in any country.

Each country has special TV color broadcast and electricity systems.
This unit is designed to record and play back using the NTSC color video signals. Recording and playback of video sources based on other color systems cannot be guaranteed.

NTSC system countries
Bahama Islands, Canada, Central America, Japan, Korea, Mexico, Taiwan, the Phillipines, U.S.A., etc.

Specifications

System

Video recording system	Rotary two-head helical scanning FM system
Audio recording system	Rotary head, FM system
Video signal	EIA standard, NTSC color
Usable cassettes	8 mm video format cassettes
Tape speed	SP: approx. 1.43 cm/sec. LP: approx. 0.72 cm/sec.
Recording time	SP mode: 2 hours LP mode: 4 hours (with Sony P6-120 cassette)
Playback time	SP mode: 2 hours LP mode: 4 hours (with Sony P6-120 cassette)
Fast forward/rewinding time	Approx. 6 minutes (with Sony P6-120 cassette)

LCD section

Picture	4 inches measured diagonally 8.19 × 6.18 cm ($3^1/_4 \times 2^1/_2$ inches)
On-screen display	TN LCD/TFT active matrix method Total picture-element number: 112,086 Effective picture-element ratio: more than 99.9%

Tuner section

Channel coverage	VHF: 2 – 13 channels UHF: 14 – 69 channels
Antenna input	75-ohm minijack for VHF/UHF

Inputs/outputs

Video input	Phono jack, 1 Vp-p, 75 ohms, unbalanced, sync negative
Video output	Phono jack, 1 Vp-p, 75 ohms, unbalanced, sync negative
Audio input	Phono jack, −10 dBs (0 dBs = 0.775 Vrms), input impedance more than 47 kilohms
Audio output	Phono jack, −10 dBs (250 mV) at load impedance 47 kilohms, output impedance less than 10 kilohms
Speakers	8 ohms, 250 mW

Timer section

Clock	Crystal lock
Time indication	12-hour cycle
Timer setting	Only for recording, 1 event/24 hours

General

Power requirements	6～9 V
Power consumption	6.9W (for continuous playback)
Operating temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	−20°C to +60°C (−4°F to 140°F)
Dimensions	137.5 × 67 × 234 mm (w/h/d) (5 1/2 × 2 3/4 × 9 1/4 inches)
Weight	Approx. 1.35 kg (2 lb 14 oz) not incl. battery pack
Accessories supplied	Headphones (1) Signal splitter (1) Carrying case (1) Battery pack NP-77 (1) AC power adaptor AC-V30 (1) Connecting cord (1) Lithium battery (1)

AC-V30

Power consumption	20 W
Power requirements	100−240 V AC, 50/60 Hz
Output voltage	DC OUT: 7.5 V, 1.6 A in operating mode Battery charge terminal: 10 V, 1.3 A in charge mode
Operating temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	−20°C to +60°C (−4°F to +140°F)
Dimensions	Approx. 67 × 39 × 138 mm (w/h/d) (2 3/4 × 1 3/8 × 5 1/2 inches) including projecting parts and controls
Weight	Approx. 310 g (11 oz)

Design and specifications subject to change without notice.

List of Recommended Accessories

		Page
Battery pack	NP-77	⑫
	NP-55	⑫
	NP-22 or NP-22H	⑪
Battery adaptor	NPA-22	⑪
Battery charger	BC-55	⑫
AC power adaptor	AC-V30	⑯
	AC-V55	⑩
DC pack	DCP-55	⑰
Battery case	EBP-55	⑮
Car battery cord	DCC-16AW	⑩
Color video camera	CCD-G1	㊻
Antenna connector	EAC-40	㊹
Signal splitter	EAC-45	㊹
Antenna cord	CCD-6M	㊹
	CCD-2	㊹
Car antenna	VCA-3W	㊹
	VCA-4E	㊹
Edit selector	SB-V1	㊿
Connecting cord	VMC-910MS/920MS (1m/2m)	㊼ – ㊿
	VMC-710M/720M (1m/2m)	㊺
	VMC-810S/820S (1m/2m)	㊿

Video Walkman hood	VCV-GV9
Car connecting pack (connect to the AUDIO OUT terminal so that you can listen to the sound with the car stereo)	CPA-2

Troubleshooting

If you think you have a problem, double-check before calling the serviceman.
You may have overlooked something relatively simple!

	Symptom	Possible causes and corrections
Power	The unit is not operable even if the POWER switch is turned on.	• No battery pack is attached. • The battery pack is exhausted. → Charge it. (page 12) • AC power adaptor or car battery cord is disconnected.
	Power turns off automatically during operation.	• The battery pack is exhausted. • The SLEEP timer has been set.
	The battery pack is quickly discharged.	• The ambient temperature is too low. • The battery pack has not been charged fully.
Clock	The clock blinks showing "PM 12:00".	If the lithium battery has been changed, reset the clock (page 18), and if necessary, reset the timer recording.
Recording and playback	The playback picture is not clear.	• The video heads may be contaminated. Clean the heads using the Sony V8-25CL cleaning cassette (optional). For details on cleaning, refer to the instructions furnished with the cleaning cassette. • The video heads may be damaged.
	During recording, the picture is not clear.	TV signal is too weak. Adjust the indoor antenna or connect an external antenna.
	Recording cannot be made.	• The safety tab on the cassette is slid out. • Moisture condensation has occured.
	The tape does not run even if the tape transport button is pressed.	• Timer setting has been made. Press the TIMER REC ON/OFF button and turn on the unit again. • Moisture condensation has occured.
	The camera recording cannot be made.	The camera is not connected correctly. (page 46)
	The cassette cannot be ejected.	• No power is supplied to the unit. • The battery pack is exhausted. Use the charged battery. (page 12)

	Symptom	Possible causes and corrections
TV	Picture is muted.	LCD ON/OFF button has been pressed. Press it again.
	Both picture and sound are muted.	The unit is in the timer recording mode. Press LCD ON/OFF.
	Picture appears but no sound	• Adjust the VOLUME control. • Disconnect the headphones.
	No color	Adjust COLOR. (page 24)
	Snow and noise appear.	Check the external antenna.
	Dotted lines or stripes	This is often caused by local interference. (e.g. cars, neon signs, hair dryers, etc) Adjust antenna for minimum interference.
	Double images or ghosts	Reflections from nearby mountains or buildings often cause this problem. A highly directional antenna may improve the picture.
Timer recording	The timer setting display does not appear.	Set the clock (page 18).
	A timer recording has not been made.	• The safety tab on the cassette was slid out. (page 29) • The tape was not long enough. • The TIMER REC ON/OFF button has not been pressed. • The clock was not set correctly. • The battery pack was exhausted. • There has been a power interruption (for AC operation). • Moisture condensation has occured. (page 52)

To stop the timer recording

Press TIMER REC ON/OFF again.

To check the setting

Press TIMER SET/CHECK while the TIMER REC lamp is lit. The power is turned on and the turn-on and the turn-off times will be displayed.

If you have made a mistake in timer setting

Press TIMER REC ON/OFF to cancel the timer recording, then turn the unit on and set the timer again.

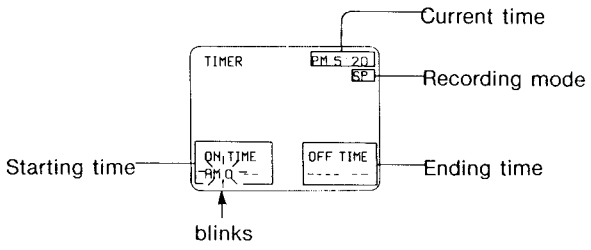
To monitor the sound and picture being recorded

Press LCD ON/OFF.

Quick Reference on Timer Setting

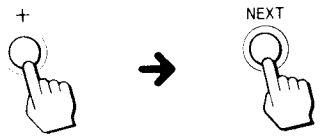
Refer to page 38 of this manual for details.

1 **Press TIMER SET/CHECK.**
The screen becomes dark.



Setting the starting time

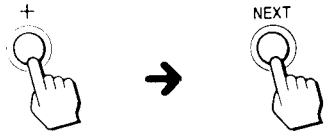
2 **Set the hour.**



3 **Set the minute.**

Setting the ending time

4 **Set the hour.**



5 **Set the minute.**

6 **Press TIMER REC ON/OFF.**

Sony Corporation Printed in Japan

Cut along this line for outdoor use.